

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A telecommunications system comprising:

an originating circuit-switched network for providing originating signals

in response to voice input,

an originating gateway computer for converting said originating signals

into digital data packets,

a terminating gateway computer that accepts out of band signaling and

converts said digital data packets into terminating signals,

a terminating circuit-switched network for providing voice output in

response to said terminating signals, and

a packet-switched network for transmitting said digital data packets from

said originating gateway computer to said terminating gateway computer, at least one of

said originating and terminating gateway computers comprising a component for routing

said digital data packets through said packet-switched network from said originating

gateway computer to said terminating gateway computer;

wherein said terminating circuit-switched network is capable of providing

first return signals to said terminating gateway computer in response to return voice

input,

wherein said terminating gateway computer comprises a component for converting said first return signals into return packets of return digital data,

wherein at least one of said originating and terminating gateway computers comprises a component for routing said return packets through said packet-switched network from said terminating gateway computer to said originating gateway computer,

and wherein said originating gateway computer comprises a component for converting said return packets into second return signals.

4. (previously presented) A telecommunications system according to claim 1, wherein said terminating gateway computer comprises a terminating buffer component for storing said digital packets prior to the conversion thereof into said terminating signals.

5. (original) A telecommunications system according to claim 4, wherein said terminating gateway computer further comprises a component for rearranging said stored digital packets to maintain a proper packet order.

6. (original) A telecommunications system according to claim 1, wherein said routing component provides said routing in response to dialed digits.

7. (original) A telecommunication system according to claim 1, wherein said routing component provides said routing in response to spoken digits.

9. (previously presented) A telecommunications system according to claim 1, wherein said originating gateway computer comprises an originating buffer component for storing said return packets prior to conversion thereof into said second return signals.

10. (original) A telecommunications system according to claim 9, wherein said originating gateway computer further comprises a component for rearranging said stored return packets to maintain a proper packet order.

11. (previously presented) A telecommunications system comprising:
an originating gateway computer for providing digital packets
corresponding to originating signals produced in response to voice input,
a gateway computer that accepts out of band signaling and converts said digital packets into terminating signals,
a circuit-switched network for providing voice output in response to said terminating signals, and
a packet-switched network for transmitting said digital packets from said originating gateway computer to said gateway computer, at least one of said originating gateway computer and said gateway computer comprising a component for routing said

digital packets through said packet-switched network from said originating gateway computer to said gateway computer;

wherein said circuit-switched network is capable of providing first return signals to said gateway computer,

wherein said gateway computer comprises a component for converting said first return signals into packets of return digital data,

wherein at least one of said originating gateway computer and said gateway computer comprises a component for routing said return packets through said packet-switched network from said gateway computer to said originating gateway computer,

and wherein said originating gateway computer comprises a component for converting said return packets into second return signals.

14. (original) A telecommunications system according to claim 11, wherein said gateway computer comprises a buffer component for storing said digital packets prior to the conversion thereof into said terminating voice signals.

15. (original) A telecommunications system according to claim 14, wherein said gateway computer further comprises a component for rearranging said stored digital packets to maintain a proper packet order.

16. (original) A telecommunications system according to claim 11, wherein said routing component provides said routing in response to data received from said gateway computer.

17. (original) A telecommunications system according to claim 11, wherein said routing component provides said routing in response to a typed input from a computer keyboard.

19. (previously presented) A telecommunications system according to claim 11, wherein said originating network comprises a buffer component for storing said return packets prior to conversion thereof into said second return signals.

20. (original) A telecommunications system according to claim 19, wherein said originating network further comprises a component for rearranging said stored return packets to maintain a proper packet order.

22. (previously presented) A telecommunications method comprising:
providing originating digital packets for transmission from an originating gateway computer, said originating digital packets corresponding to originating signals produced in response to originating voice input;

routing said originating digital packets from said originating gateway computer to a gateway computer, that accepts out of band signaling, through a packet-

switched network via an originating routing component in at least one of said originating gateway computer and said gateway computer;

converting said originating digital packets into terminating signals for transmission from said gateway computer;

transmitting said terminating signals through a circuit-switched network for providing terminating voice output in response to said terminating signals;

providing first return signals to said gateway computer in response to return voice input into said circuit-switched network;

converting said return signals into return digital packets of return digital data for transmission from said gateway computer;

routing said return digital packets through said packet-switched network from said gateway computer to said originating gateway computer using said originating routing component or another routing component in said originating gateway computer or said gateway computer;

and converting said return digital packets into second return signals.

26. (previously presented) A telecommunications system according to claim 1, wherein at least one of said routing components comprises an address resolution logic and a network routing database implemented with a central processing unit.

27. (previously presented) A telecommunications system according to claim 1, wherein said originating gateway computer includes a component for providing a ring

back tone or a busy tone to a telephone connected to said originating circuit-switched network.

28. (previously presented) A telecommunications system according to claim 1, wherein said originating gateway computer includes a component for providing out of band signalling between said originating gateway computer and said originating circuit-switched network.

29. (previously presented) A telecommunications system comprising:

- an originating circuit-switched network for providing originating signals in response to voice input,
- an originating gateway computer for converting said originating signals into digital data packets,
- a terminating gateway computer that accepts out of band signaling and converts said digital data packets into terminating signals,
- a terminating circuit-switched network for providing voice output in response to said terminating signals, and
- a packet-switched network for transmitting said digital data packets from said originating gateway computer to said terminating gateway computer, at least one of said originating and terminating gateway computers comprising a component for routing said digital data packets through said packet-switched network from said originating gateway computer to said terminating gateway computer;

wherein said terminating circuit-switched network is capable of providing first return signals to said terminating gateway computer in response to return voice input,

wherein said terminating gateway computer comprises a component for converting said first return signals into return packets of return digital data,

wherein at least one of said originating and terminating gateway computers comprises a component for routing said return packets through said packet-switched network from said terminating gateway computer to said originating gateway computer,

wherein said originating gateway computer comprises a component for converting said return packets into second return signals, and

wherein at least one of said originating and terminating gateway computers comprises a time-division multiplexing bus interconnecting at least one digital trunk interface with a digital signal processor and an application-specific integrated circuit, and a system bus interconnecting said digital signal processor and said application-specific integrated circuit with a central processing unit and a random access memory.

30. (previously presented) A telecommunication system according to claim 29, wherein said system bus is interconnected with said originating circuit-switched network via a component for out of band signalling.

31. (previously presented) A telecommunications system according to claim 1, wherein said originating circuit-switched network comprises at least one dedicated address for a caller, and a routing configuration from said dedicated address to said originating gateway computer, said routing configuration being such that a caller's address and a destination address are passed to said originating gateway computer by the originating circuit-switched network and are routed to said terminating gateway computer by an originating routing component.

32. (previously presented) A telecommunications method according to claim 22, wherein said originating digital packets or said return digital packets or both said originating and return digital packets are routed using an address resolution logic and a network routing database implemented with a central processing unit.

33. (previously presented) A telecommunications method according to claim 22, further comprising providing a ring back or busy tone to a telephone connected to said originating gateway computer through an originating network in response to signaling from a component of said originating gateway computer.

34. (previously presented) A telecommunications method comprising:
providing originating digital packets for transmission from an originating gateway computer, said originating digital packets corresponding to originating signals produced in response to originating voice input;

routing said originating digital packets from said originating gateway computer to a gateway computer, that accepts out of band signaling, through a packet-switched network via an originating routing component in at least one of said originating gateway computer and said gateway computer;

converting said originating digital packets into terminating signals for transmission from said gateway computer;

transmitting said terminating signals through a circuit-switched network for providing terminating voice output in response to said terminating signals;

providing first return signals to said gateway computer in response to return voice input into said circuit-switched network;

converting said return signals into return digital packets of return digital data for transmission from said gateway computer;

routing said return digital packets through said packet-switched network from said gateway computer to said originating gateway computer using said originating routing component or another routing component in said originating gateway computer or said gateway computer;

converting said return digital packets into second return signals;

estimating a unit charge for a call going through said gateway computer;

informing a caller providing said originating voice input about the unit charge; and

recording a payment method specified by the caller before providing said terminating voice output.

35. (previously presented) A telecommunications method according to claim 22, wherein said gateway computer is a terminating gateway computer, and wherein said method further comprises:

providing a caller's address and a callee's address to said originating gateway computer,

authorizing a call between the caller and the callee using the caller's address,

using the callee's address for said routing of the originating digital packets from the originating gateway computer to the terminating gateway computer,

causing the terminating gateway computer to dial out to the callee through said circuit switched network using the callee's address,

and causing the originating gateway computer to provide a return tone for advising the caller of a status of the call.

36. (previously presented) A telecommunications method according to claim 35 comprising the further step of causing the terminating gateway computer to transmit to the originating gateway computer via said packet-switched network a state change caused by the callee's answering said call.

37. (previously presented) A telecommunications method according to claim 22, wherein a caller is associated with at least one dedicated address, and wherein said method further comprises:

routing a call in accordance with a routing configuration from a telephone at said dedicated address to said originating gateway computer,

passing said originating signals, the caller's address and a destination address to the originating gateway computer in accordance with said routing configuration,

authorizing a call by checking account information of the caller through an internal data base of the originating gateway computer,

resolving a routing to said gateway computer using the destination address,

and causing the originating gateway computer to send a control message to the gateway computer along with said dedicated address and said destination address.

38. (currently amended) A method for establishing a call connection, the method comprising:

receiving, at a first gateway device, a destination address of a called device from a calling device over a first circuit-switched network;

transmitting, in response to receiving the destination address, a connection request from the first gateway device to a second gateway device over a packet-switched

network, at least one of the first gateway device and the second gateway device accepting out of band signaling;

connecting, via the second gateway device, to the called device through a second circuit-switched network using the destination address; and

establishing a call connection between the calling device and the called device through the first circuit-switched network, the packet-switched network, and the second circuit-switched network in response to the connecting.

39. (previously presented) The method of claim 38, further comprising:

prompting, via the first gateway device, the calling device for a payment method; and

validating the payment method prior to transmitting the connection request to the second gateway device.